

Claims

What is claimed is:

1. A separator tank assembly comprising:
 - 5 a separator tank having an interior chamber;
 - a corrosion-resistant layer applied over at least a portion of the separator tank interior chamber; and
 - a separator element positioned within the interior chamber of the tank, the element being electrically connected to a portion of the separator tank beneath the corrosion-10 resistant layer.
2. The separator tank assembly of Claim 1, further comprising
 - 15 a lid for sealing the tank, the lid being made from a corrosive metal; and
 - a corrosion-resistant layer applied over a portion of the lid in facing relationship with the interior portion of the tank.
3. The separator tank assembly of Claim 1, further comprising a ledge extending from the interior portion of the tank, wherein the separator element is supported by the ledge.
- 20 4. The separator tank assembly of Claim 1, further comprising a corrosion-resistant, electrically conductive block embedded in the tank with a portion of the block protruding past the corrosion-resistant layer, the block extending between a portion of the tank beneath the corrosion-resistant layer and the separating element to electrically connect the separating element to the tank.

5. The separator tank assembly of Claim 4, wherein the separating element includes an element flange, and wherein the element flange engages the portion of the block protruding past the corrosion-resistant layer.

5 6. The separator tank assembly of Claim 4, wherein the block is press-fit into a recess formed in the tank.

7. The separator tank assembly of Claim 4, wherein the block is made from stainless steel.

10 8. The separator tank assembly of Claim 1, wherein the separating element includes an element flange, and wherein the element flange includes at least one projection extending from the flange, the at least one projection engaging the tank through portions of the tank having the corrosion-resistant layer, the at least one projection electrically connecting the separating element and the tank.

15 9. The separator tank assembly of Claim 1, wherein the separating element includes an element flange supported within the interior chamber, and wherein fasteners extend through and secure the element flange to the tank, the fasteners electrically connecting the separating element and the tank.

20 10. The separator tank assembly of Claim 1, wherein the separator element is made from a non-corrosive metal.

11. The separator tank assembly of Claim 1, wherein the corrosion-resistant layer includes paint.

12. A separator tank assembly comprising:

5 a separator tank made from a corrosive metal;

a corrosion-resistant layer applied over an interior portion of the separator tank;

a corrosion-resistant metal block coupled to the interior portion of the separator tank, the block being electrically connected with the tank; and

10 a metal separator element positioned within the interior portion of the separator tank, the separator element being coupled to the block and electrically connected with the block.

13. The separator tank assembly of Claim 12, further comprising

15 a ledge extending from the interior portion of the tank, the block being embedded in the ledge, the ledge supporting the separating element;

a lid for sealing the tank, the lid being made from a corrosive metal; and

20 a corrosion-resistant layer applied over a portion of the lid in facing relationship with the interior portion of the tank.

25 14. The separator tank assembly of Claim 13, wherein the separating element includes an element flange coupled to the ledge, wherein the lid secures the element flange against the ledge, and wherein the flange is in mating contact with a portion of the block protruding past the corrosion-resistant layer to electrically connect the separating element and the ledge.

15. The separator tank assembly of Claim 12, wherein the block is press-fit into a recess formed in the ledge.

5 16. The separator tank assembly of Claim 12, wherein the block is made from stainless steel.

17. The separator tank assembly of Claim 12, wherein the separator element is made from a non-corrosive metal.

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18. The separator tank assembly of Claim 12, wherein the corrosion-resistant layer includes paint.

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19. A method for manufacturing a separator tank assembly, the method comprising:

applying a non-corrosive layer over at least an interior portion of a separator tank made from a corrosive material;

positioning a separator element within the interior portion of the tank; and

providing an electrically conductive path through the non-corrosive layer such 20 between the separator element and a portion of the separator tank below the corrosion-resistant layer such that the separator element is electrically connected with the separator tank.